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Support Groups for Improving Quality of Life in Men with Prostate Cancer

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Abstract

Background: Prostate cancer is the second most common form of cancer affecting men today. Currently, 98% of men diagnosed with prostate cancer survive for 10 or more years after being diagnosed with prostate cancer. The prolonged course of the disease makes interventions aimed at improving quality of life an essential component of prostate cancer treatment. There is a significant body of literature that suggests that support groups can improve the quality of life of cancer patients. However, because the bulk of the studies regarding cancer support groups focused on women with breast cancer, it is unclear how applicable the results are to men with prostate cancer.

Methods: A thorough search of the medical literature was conducted using, Medline (Ovid), CINAHL, Google Scholar, and Web of Science with the keywords: prostate cancer, prostate neoplasm, support group, peer group, and self-help group. Articles that reported primary data, included only men with prostate cancer, and measured changes in quality of life resulting from support group involvement were included. All articles were assessed for quality using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system and assigned a rating of high, medium, low, or very low.

Results: Four studies met the criteria for inclusion in this review. Three of the papers were randomized control trials and one was a cohort study. Each of the studies used a different support group format and each of them found that support group participation resulted in statistically significant improvement in multiple areas related to quality of life.

Conclusion: Participation in a prostate cancer support group is likely to result in improved quality of life for men with prostate cancer. At this time there is insufficient evidence to demonstrate the relative efficacy of one support group format over another; however, men are likely to receive some benefit regardless of format. Given the low cost of support group participation and the low risk involved, it is reasonable to recommend that men with prostate cancer participate in a support group.

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List of Abbreviations

CES-D……...…Center for Epidemiological Studies Depression Scale
EPIC-26……The Expanded Prostate Cancer Index Composite
GDS…….Geriatric Depression Scale
GRADE…….Grading of Recommendations Assessment, Development and Evaluation
PSA……...Prostate Specific Antigen
UCLA PCI……University of California, Los Angeles Prostate Cancer Index

Support Groups for Improving Quality of Life in Men with Prostate Cancer

BACKGROUND

Improvements in the detection and treatment of prostate cancer have led to growing numbers of men living with prostate cancer. In 2010, there was estimated to be over 2.6 million men living with prostate cancer in the United States.[1] In 2013, approximately 238 590 additional men will be diagnosed with prostate cancer making it the second leading cause of cancer in men.[2] Men with prostate cancer are also living longer after being diagnosed with prostate cancer. Currently, the 5-year survival rate for prostate cancer is 99% and the 10-year survival rate is 98%.[2] As the numbers, and life expectancy, of men living with prostate cancer continue to increase, finding interventions to improve the quality of life for men living with prostate cancer is becoming increasingly important.

Prostate cancer and its treatment can lead to a number of complications that negatively impact quality of life. Prostate cancer is associated with three major disease-specific problems, specifically urinary incontinence, sexual dysfunction, and bowel dysfunction.[3] Prostate cancer is also associated with a number of general problems that impact quality of life including, but not limited to, anxiety and depression, bodily pain, loss of vitality, poorer social and emotional well-being, diminished mental and physical functioning, financial burdens, and reduced capacity to work.[3]

Social support is an important contributor to health and well-being that can mitigate the impact of stressors, including those caused by illness. There is a growing body of work that suggests that support groups are an effective way to provide social support to patients with cancer and increase their quality of life.[4] Several theories have been developed to attempt to explain how support groups improve quality of life.[5] The stress and coping theory suggests that social support enhances coping skills and mediates the stress response.[6,7,8] The social comparison theory posits that participation in support groups normalizes experiences, encourages health promoting behaviors, enhances self-esteem, and provides positive role modeling.[9,10] The helper-therapy principle holds that support groups enhance self-esteem by providing an opportunity to help other people in similar circumstances rather than to simply focus on their own problems.[11]

A well-written review of literature[4] regarding support groups raised questions about the applicability of this methodology to people affected by cancers other than breast cancer. Most of the literature regarding support groups has focused on women with breast cancer. As this cohort of women has arguably the greatest visibility and social support of any group of cancer patients, it is uncertain that patients with other forms of cancer will receive the same quality of life improvements as a result of support group participation. Further, gender differences may have an impact on the rate of participation in, and the amount of benefit received from, support groups. There is research to suggest that men are less likely than women to participate in cancer support groups. A study[12] of women with breast cancer and men with prostate cancer found that 33% of women with breast cancer had attended a support group as opposed to just 13% of men with prostate cancer. Men are also less likely to seek social support amongst their

group of friends and family. Harrison et al[13] found that men are more likely to share their concerns with just one confidante while women are more likely to confide in their friends, family, and intimate partner. Dean et al[14] suggest that men may be less inclined to share their feelings with others because socialization and social norms cause men to contain their emotions.

There is also some data to suggest that providers are less likely to inform prostate cancer patients about support groups than breast cancer patients. Krizek et al[12] found that 71% of breast cancer patients were told about support groups as opposed to only 56% of men with prostate cancer. However they found that a significant number of patients that are told about support groups will attend. Of the men told about prostate cancer support groups, 24% reported attending at least once. The average number of meetings attended for men was 10.6 meetings over an average period of 15.2 months.[12]

Due to the numerous differences between the cohorts of women with breast cancer and men with prostate cancer, the bulk of the research regarding support group involvement may be inapplicable to men with prostate cancer. The purpose of this literature review is to identify and assess the primary research regarding the efficacy of support groups for men with prostate cancer.

METHODS

A thorough search of medical literature was conducted using, Medline (Ovid), CINAHL, Google Scholar, and Web of Science. Results were limited to men already diagnosed with prostate cancer by combining the terms ‘prostate cancer’ and ‘prostate neoplasm’ using the ‘or’ function. To find articles focused on various support group

formats, the search terms ‘support group’, ‘peer group’, and ‘self-help group’ were combined using the ‘or’ function. These two sets of search results were then combined using an ‘and’ statement and the results were limited to articles that were published in English. The remaining articles were reviewed to ensure that they met all of the inclusion criteria which included, 1) reported primary data, 2) included only men with prostate cancer, 3) studies designed to detect changes in quality of life measures as a result of support group participation. The articles that met the inclusion criteria were assessed for quality using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system and assigned a rating of high, medium, low, or very low.[15] See Table I.

RESULTS

The initial search yielded 212 results. The results were screened using the inclusion criteria described above and four articles were selected for inclusion in this review. Of the four studies, three of them were randomized controlled trials[16,17,18] and one was an observational study.[19] Each of the studies used a different support group format, and each of them found that there was a statistically significant improvement in one or more quality of life measures as a result of support group participation.

Osei et al (2013)

Osei et al[16] performed a randomized controlled trial comparing the effects of participation in an online support group with an educational resource kit on quality of life in men with prostate cancer. In this trial, 40 men were asked to complete a baseline

quality of life survey before being randomized into an experimental and control group. Men randomized to the experimental group were asked to participate in an online support group at least three times per week for six weeks. Men randomized to the control group received a collection of educational pamphlets which included information about various topics related to prostate cancer and its treatment. Both groups completed additional quality of life surveys at 6 and 8 weeks after the baseline measurement.[16]

The researchers sent letters to 1000 men identified through the California Region 5 Desert Sierra Cancer Surveillance Program requesting their participation in the study. To be included in the study, the participants were required to meet the inclusion criteria which included, 1) diagnosed with prostate cancer within 5 years of the study, 2) English literacy, 3) access to internet and email, 4) being between the ages of 40 and 85, and 5) being married or living with a significant other. Of the 51 men that responded, 11 were excluded from participation due to death of the patient (n = 2), travel plans that barred participation (n = 3), lack of adequate internet access (n = 4), and language barriers that prevented participation in the support group (n = 2). The remaining men were arranged into pairs based on similarity of demographic data and a member of each pair was randomized to the experimental and control group.[16]

After the men were randomized, but before they were notified of their group assignment, they were sent a link to complete a baseline survey online. After the survey was complete the men were notified electronically of their group assignment. Men assigned to the experimental group were sent a link to the Us TOO International Web site (www.ustoo.org) and were asked to participate in the prostate cancer education and support program offered on the organization's website at least three times per week for 6

weeks. Men randomized to the control group were mailed a prostate cancer resource kit that contained educational materials provided by Us Too International.[16]

Quality of life was measured at baseline, 6 weeks, and 8 weeks using four tools, the SF-12, the EPIC-26, the Satisfaction with Life Scale, and the Relationship Satisfaction Questionnaire. In addition, at 8 weeks the men in the experimental group were asked to rate their level of satisfaction with the online support group using a survey designed by the investigators. The SF-12 is a 12 item survey that is derived from the SF-36. Both surveys assess 8 dimensions of health. Possible scores range from 0 to 100 with higher scores indicating better health.[20] The Expanded Prostate Cancer Index Composite (EPIC-26) is a 26 item survey used to assess health-related quality of life in men with prostate cancer.[21] It assesses five domains of health including 1) urinary irritation/obstruction, 2) urinary incontinence, 3) bowel health, 4) sexual health, and 5) hormonal health. Possible scores range from 0 to 100 with higher scores indicating better health. The Satisfaction with Life Scale is a five item survey that used a seven response scale ranging from strongly agree to strongly disagree.[22] The mean of the response was used to generate a score ranging from 1 to 7 with a higher score indicating a higher satisfaction with life. The relationship satisfaction questionnaire assesses 12 items on a 4 point scale to measure relationship satisfaction of spousal relationships.[23] Possible scores range from 1 to 4 with higher scores indicating greater satisfaction with the spousal relationship.

The men in the experimental group showed statistically significant improvement in three health-related quality of life categories: 1) urinary irritation and obstruction health, 2) sexual health, and 3) hormonal health. All three of these measures showed

increases between the baseline measurement and the 6 week measurement that had returned to baseline by the 8 week measurement. The experimental group began with a mean urinary irritation/obstruction health score of 85.51 which increased to 91.33 at 6 weeks and fell to 85.22 at 8 weeks. The mean sexual health score for the experimental group was 33.92 at baseline, rose to 47.80 at 6 weeks, and dropped to 20.57 at 8 weeks. The experimental group's baseline hormonal health score was 82.36 which increased to 89.50 at 6 weeks and fell to 81.27 at 8 weeks.[16] See Table II.

Weber et al (2004)

Weber et al[17] performed a randomized controlled trial comparing the effects of one-on-one support sessions and the usual standard of care. Prior to the beginning of the study, 10 long-term prostate cancer survivors were selected to be support partners. They were required to have prostate cancer for at least 3 years and have a stable prostate specific antigen (PSA) measurement, indicating continuing remission, at the time of the experiment. The support partners were further required to have undergone a radical prostatectomy that resulted in urinary and sexual dysfunction as part of their treatment, speak English fluently, and be willing to share their life experiences with the study participants. They then received 2 hours of training to develop skills required to conduct one-on-one support sessions.

One hundred men were contacted after their 6 week follow up visit following a radical prostatectomy. To be eligible for the study, the men had to have sexual and urinary side effects resulting from their prostatectomy, have no prior history of cancer, not be considered terminally ill, have no recent loss of a loved one, and speak fluent

English. Of those that were contacted, 30 men met the inclusion criteria, agreed to participate in the study, and were able to travel to the meetings. The 30 participants were randomized to either a control group which did not participate in any support sessions, or to the experimental group which was paired with a dyad with similar demographic characteristics to minimize the impact of cultural differences. The participants met with their support partners eight times over the course of 8 weeks at coffee shops where they could have private conversations. The support partners kept careful logs of the duration, content, and quality of the meetings.

The participants completed five different surveys over the course of the study that measured social support, self-efficacy, depression, incontinence and erectile dysfunction, and comorbidities that can contribute to symptoms of depression. The Modified Inventory of Socially Supportive Behaviors was used to measure social support. This survey assessed 41 items on a scale from 0 to 4 with total scores ranging from 0 to 164. Higher total scores indicated greater social support.[24] Self-efficacy was measured using the Stanford Inventory of Cancer Patient Adjustment. Participants rated 38 items from 0 to 10 the total scores ranging from 0 to 380.[25] To measure depression, the participants filled out the short version of the Geriatric Depression Scale (GDS). The GDS is a survey that uses 15 yes or no questions to distinguish between somatic complaints stemming from illness and symptoms of depression.[26] The GDS has a range of scores from 0 to 15 with higher scores indicating greater depression. The University of California, Los Angeles Prostate Cancer Index (UCLA PCI) was used to measure health-related quality of life in 6 categories, urinary function and bother, bowel function and bother, and sexual function and bother.[27] Each category on the UCLA PCI is scored from

0 to 100 with higher scores indicated better function or less bother. The Charlson Index was used to determine the psychological and physiologic burden imposed by the participants' comorbidities.[28] Higher scores are associated with greater comorbid conditions that may cause depressive symptoms.

The men in the experimental group showed statistically significant improvement in quality of life relative to the control group in 3 of the categories measured, 1) self-efficacy, 2) depression, and 3) bother by sexual side effects. The mean self-efficacy scores for the experimental group was 290.3 at baseline and rose to 314.9 after 8 weeks. The mean depression score was 2.2 at baseline and decreased to 0.3 at the 4 week measurement and increased to 0.4 at the 8 week measurement. Analysis of the data showed that this constituted a statistically significant difference between the experimental and control groups at the 4 week measurement; however, the difference between the two groups was no longer statistically significant at the 8 week measurement. Finally, when the data was analyzed, the experimental group had a statistically significant improvement in sexual bother over the control group ($t=2.6$, $p=0.014$). See Table III.

Lepore et al (2003)

Lepore et al[18] conducted a randomized controlled trial comparing an educational lecture series without an open discussion period, an education lecture series that included an open discussion period, and the standard of care. Men who had been treated for localized prostate cancer were recruited from 11 Pittsburgh area clinics and hospitals. To be eligible for inclusion in the study the men had to have no prior history of cancer, live within a 1 hour driving distance from the intervention site, and have non-metastatic

disease at the time of diagnosis. Of the 576 men that were referred to the study 279 met the inclusion criteria, completed the baseline surveys and agreed to randomization. The men were randomized into one of three groups, a control group, an education only group, and an education plus facilitated peer discussion group. The men in the education only group attended six weekly 1 hour lectures on various topics relating to prostate cancer. At each education session, 10 minutes was allotted for question and answer sessions but discussion between men attending the sessions was discouraged. Men randomized to the education plus facilitated peer discussion group were given the same six weekly 1 hour lectures, however, they participated in a 45-minute group discussion facilitated by a male clinical psychologist after each lecture. Men in the control group received nothing in addition to the normal standard of care.

The men were interviewed at four times during the course of the study, once before being randomized, and at 2 weeks, 6 months, and 12 months after completion of the intervention. The researchers used various surveys to detect differences in six areas, 1) prostate cancer knowledge, 2) health related behavior, 3) general quality of life, 4) depression, 5) disease specific quality of life, and 6) employment. Prostate cancer knowledge was assessed at baseline at the first post-intervention interview. It consisted of a 13 question true/false quiz covering various topics related to prostate cancer with higher scores indicating greater knowledge. Health behavior was assessed using a 5 question survey that measured the frequency with which men exercised, performed Kegel exercises, took time to relax, took vitamins, and got adequate sleep. A health behavior index score was calculated based on responses with a range of 5 to 33 with higher scores indicating greater engagement in healthy behavior. General quality of life was measured

using the SF-36. The SF-36 survey measures eight domains of quality of life including vitality, physical functioning, bodily pain, general health perceptions, physical role functioning, emotional role functioning, social role functioning, and mental health.[29] Each domain is assigned a score ranging from 0 to 100 with higher scores indicating better health or functioning. Depressive symptoms were measured using a 15 item variation of the Center for Epidemiological Studies Depression Scale (CES-D). The CES-D rates depressive symptoms using a score ranging from 0 to 3 with higher scores indicating greater depressive symptoms.[30] Disease specific quality of life was assessed using the University of California, Los Angeles Prostate Cancer Index (UCLA PCI) described above. Each category on the UCLA PCI is scored from 0 to 100 with higher scores indicated better function or less bother. Employment status was determined at each interview.

Analysis of the data showed that both of the interventions led to statistically significant improvement in prostate cancer knowledge, participation in positive health behaviors, and physical function over the control group. Although the effect was not large enough to be statistically significant, the education plus discussion group showed relatively more improvement in all of these areas over the group that received education alone. In addition, the education plus discussion group showed statistically significant improvements in employment and bother from sexual dysfunction.

Another trend that was discovered upon statistical analysis of the data was that men with less formal education, as measured by having a college degree, tended to receive greater benefit from the interventions than men who had college degrees. This trend was particularly evident in two areas, improvements in healthy behavior, and

physical functioning. Men without college degrees showed significant improvement in physical functioning as a result of both interventions, while men with college degrees showed no significant improvement in this area. Similarly, men without college degrees showed significant improvements in healthy behaviors as a result of participation in the interventions while their peers with college degrees did not. See Table IV.

Katz et al (2002)

Katz et al[19] performed a cohort study that compared demographic characteristics, and health related quality of life, in men attending prostate cancer support groups with that of men that were enrolled in a prostate cancer database. They recruited 96 Men with prostate cancer from 10 support groups in the San Francisco area. To be eligible the men were required to be over 18 years old, have biopsy proven prostate cancer, and have attended at least one support group meeting. Numerous quality of life measures of men attending support groups were compared to those of men enrolled in Cancer of the Prostate Strategic Research Endeavor (CaPSURE) database. The CaPSURE database is a longitudinal, observational database that registers men with biopsy proven prostate cancer from 35 urology practices across the United States.[31,32] To be eligible for comparison, men in the CaPSURE database were required to have at least 1 year of follow up, have completed a health-related quality of life questionnaire at the last follow up, and not have selected active surveillance as the sole intervention for their prostate cancer. Of the 6969 men enrolled in the CaPSURE database at the time the study was conducted, 1966 men qualified and were included in the analysis.

Two instruments were used to measure health-related quality of life, the RAND SF-36 Health Survey (SF-36), and the UCLA PCI. Both the SF-36 and the UCLA PCI grade each scale from 1 to 100 with higher scores indicating better health or functioning.

When the data were analyzed, the researchers found several statistically significant differences between the two groups of men. The results from the SF-36 survey identified four areas where men in support groups had statistically significant improvements in health-related quality of life, physical function role, vitality/fatigue, general health and mental health. The data from the UCLA PCI surveys identified four areas with statistically significant improvements in the experimental group, sexual function, sexual bother, urinary bother, and bowel bother.

Comparison of the demographic characteristics of the two groups showed that, although there were no differences between the two groups in terms of ethnicity or age, the men that attended support groups tended to have higher annual incomes and education levels than men in the CaPSURE database. Only 7.5% of the men enrolled in support groups had no college education while 43.5% of the men enrolled in the CaPSURE database had never attended college. They also found that 41.8% of men attending support groups made over $50 000 per year as opposed to only 16.1% of men in the CaPSURE database. Men in the CaPSURE database were more likely to be living in poverty with 41.6% having a household income below $20 000 a year compared to only 14% of men in support groups. They also found that men in support groups tended to receive more treatment than men in the CaPSURE database with 69.4% of the support group participants receiving more than one form of treatment as opposed to just 35.9% of men in the CaPSURE database. See Table V.

DISCUSSION

Implications for Clinical Practice

Although each of the four studies[16,17,18,19] included in this review used different support group formats, all of the studies demonstrated statistically significant improvement in multiple quality of life measures. The agreement across all of the studies constitutes strong evidence in favor of the positive impact of support groups for men with prostate cancer. Further, the findings of these studies suggest that the larger body of work regarding cancer support groups can be applied to men with prostate cancer. These four studies, when considered in the context of the rest of the literature pertaining to cancer support groups, provide compelling evidence that cancer patients, including men with prostate cancer, can garner significant quality of life improvements from participation in support groups.

Two studies[18,19] demonstrate that men with lower levels of formal education and lower socioeconomic status are less likely to participate in support groups but receive greater benefit from participation. Katz et al[19] found that men with lower socioeconomic status and less formal education are less likely to use support groups than their peers. Lepore et al[18] found that men with less formal education tend to receive more benefit from support group participation. Men without a college degree showed significant improvements in positive health behaviors and improvements in physical functioning that were not evident in men with college degrees. These findings suggest that this group of men in particular should be encouraged to participate in support groups.

Based on these studies alone, it is not possible to make strong recommendations for one support group format over another. However, the consistent improvements in

quality of life, despite support group format, suggests that any type of support group that a patient is comfortable participating in is likely to be beneficial. When making recommendations regarding prostate cancer support groups, providers should consider providing a menu of options to patients as compliance is more likely to be a determinant of outcome than support group format.

Ideally, providers would provide patients with information regarding support groups as close to the time of diagnosis as possible. There are a variety of treatment approaches available to men with prostate cancer that are associated with serious side effects. Support groups can provide men with a host of knowledge regarding a variety of treatment options and side effects that may better prepare patients to face challenging treatment decisions. Patients with lower levels of education and medical literacy in particular may benefit from early involvement in support groups.

Limitations of the Studies

Due to the nature of the intervention being tested, there is an inherent lack of blinding to all of the studies as there is no way to blind the participants to the intervention that they're receiving. The lack of blinding may introduce bias into the results of the study and has the potential to lead to an overestimation of the effect of the intervention. Participants that are not selected to be in the experimental group may report lower quality of life scores based on disappointment from being excluded from the intervention. Likewise, participants selected for the experimental group may report higher quality of life scores out of excitement for being included in the experimental group. Further,

members of both groups may be inclined to provide investigators with the responses that they believe they are looking for.

The randomized controlled trial conducted by Osei et al[16] had two significant shortcomings that diminish the quality of evidence. First, the intervention only lasted six weeks and the outcomes were only measured for eight weeks. Both the intervention and the observational period may be too short to detect changes in quality of life outcomes. Further, the experiment was not sufficiently long to detect any long term impact that the intervention had. Secondly, the study had a very low response rate with only 51 of the 1000 men that were contacted responding. This led to a sample size that may have been too small to detect all of the treatment effects.

The randomized controlled trial performed by Weber et al[17] also had three significant limitations that may have introduced bias into the results. First, the sample size was small with just 15 men randomized to the experimental group. The small sample size impacts the study's ability to detect small treatment effects. Second, the sample was not representative of the cohort of men with prostate cancer. The men included in the study had all undergone radical prostatectomy and the majority of the participants were white, married, well educated, and made over $50 000 per year. The demographics of the experimental group raise questions regarding the generalizability of the results to all men with prostate cancer. Finally, the study was only eight weeks long and as a result, was not sufficiently long to detect long term impacts of support group participation.

The study conducted by Lepore et al[18] had the best design of the three randomized controlled trials included in this study. Aside from the inherent lack of blinding, there were no significant methodological limitations.

The cohort study conducted by Katz et al[16] had only one methodological problem, however, it would likely lead to an underestimation of the treatment effect and therefore does not significantly impact the applicability of the results. Cohort trials, by virtue of being observational trials, provide a lower level of evidence than randomized controlled trials as they have a higher inherent risk of bias. The one methodological shortcoming of the study was the lack of screening of the men in the CaPSURE database for support group participation to ensure that members of the control group were not exposed to the intervention. However, this limitation is likely to lead to the underreporting of the treatment effect and does not represent a significant limitation of the study.

CONCLUSION

The four studies[16,17,18,19] included in this review, when taken as a whole, provide compelling evidence that men with prostate cancer benefit from participation in support groups. In addition, support groups have low or no cost of participation and involvement is associated with little risk. In light of the low cost and limited risk, providers should have a relatively low threshold for recommending support groups to their patients with prostate cancer.

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Table I. Characteristics of Reviewed Studies

Quality Assessment						
Study Design	*Downgrade Criteria*					*Quality of Evidence*
	Limitations	*Indirectness*	*Imprecision*	*Inconsistency*	*Publication bias likely*	
Osei et al[16]						
Randomized Controlled Trial	Very Serious[a,b]	Not Serious	Serious[c]	Not Serious	Not Likely	Very Low
Weber et al[17]						
Randomized Controlled Trial	Very Serious[a,b]	Not Serious	Serious[c]	Not Serious	Not Likely	Very Low
Lepore et al[18]						
Randomized Controlled Trial	Serious[a]	Not Serious	Serious[c]	Not Serious	Not Likely	Moderate
Katz et al[19]						
Cohort Study	Not Serious[d]	Not Serious	Not Serious	Not Serious	Not Likely	Moderate

a Neither the participants nor the experimenters were blinded to group allocation,
b Studies were a short duration
c Small sample size
d All plausible confounding would reduce the demonstrated effect

Table II. Data from Osei et al

Variable	Group	
	Control Mean (95% CI)	**Experimental Mean (95% CI)**
Perceived Mental Health		
Baseline	46.61 (43.82-49.40)	45.79 (43.00-48.58)
6 Weeks	40.64 (37.92-43.36)	45.24 (42.51-47.96)
8 Weeks	45.39 (42.47-48.31)	45.70 (42.78-48.62)
Life Satisfaction		
Baseline	5.31 (4.74-5.88)	5.21 (4.64-5.78)
6 Weeks	3.54 (2.93-4.16)	5.35 (4.73-5.96)
8 Weeks	5.24 (4.46-6.01)	4.34 (3.57-5.12)
Perceived Physical Health		
Baseline	55.99 (52.78-59.19)	52.96 (49.76-56.17)
6 Weeks	42.44 (38.55-46.33)	51.25 (47.36-55.13)
8 Weeks	53.96 (49.65-58.28)	47.36 (43.05-51.68)
Spouse Positive		
Baseline	3.81 (3.65-3.97)	3.66 (3.50-3.83)
6 Weeks	3.15 (2.84-3.47)	3.42 (3.11-3.74)
8 Weeks	3.75 (3.51-3.99)	3.44 (3.20-3.68)
Spouse Negative		
Baseline	1.57 (1.41-1.73)	1.66 (1.50-1.82)
6 Weeks	2.04 (1.80-2.29)	1.70 (1.45-1.94)
8 Weeks	1.62 (1.48-1.76)	1.68 (1.54-1.82)
Urinary Incontinence Health		
Baseline	72.48 (65.08-79.87)	73.06 (65.66-80.46)
6 Weeks	72.01 (67.71-76.32)	69.60 (65.30-73.90)
8 Weeks	72.05 (64.23-79.87)	65.94 (58.12-73.76)
Urinary Irritation/Obstruction Health		
Baseline	91.99 (86.88-97.31)	85.51 (80.19-90.82)
6 Weeks	82.42 (76.16-88.68)	91.33 (85.07-97.59)
8 Weeks	88.53 (81.90-95.16)	85.22 (78.59-91.85)
Sexual Health		
Baseline	43.97 (32.89-55.05)	33.92 (22.84-45.00)
6 Weeks	18.80 (9.69-27.92)	47.80 (38.68-56.91)
8 Weeks	30.32 (19.72-40.91)	20.57 (9.97-31.16)
Hormonal Health		
Baseline	88.64 (82.25-95.04)	82.36 (75.96-88.75)
6 Weeks	65.75 (58.60-72.90)	89.50 (82.35-96.65)
8 Weeks	90.23 (83.75-96.70)	81.27 (74.80-87.75)
Bowel Health		
Baseline	98.21 (94.13-102.2)	94.92 (90.84-98.99)
6 Weeks	96.29 (92.88-99.71)	97.04 (93.63-100.50)
8 Weeks	95.85 (91.03-100.67)	95.61 (90.79-100.43)

Table III. Data from Weber et al

Variable	Group	
	Control (n=15) Mean (S.D.)	**Experimental (n=15) Mean (S.D.)**
Depression		
Pre-test	1.7 (2.2)	2.2 (3.3)
4 weeks	1.7 (1.7)	0.3 (0.6)
Post-test	2.1 (2.3)	0.4 (0.8)
Self-efficacy		
Pre-test	319.5 (37.5)	290.3 (40.6)
Post-test	309.7 (36.5)	314.9 (26.3)
Self-efficacy Emotional Sub-Scale		
Pre-test	77.7 (10.4)	69.1 (12.1)
4 weeks	78.9 (8.2)	76.1 (5.9)
Post-test	74.8 (11.2)	75.7 (6.7)
Social Support		
Pre-test	101.7 (17.9)	98.2 (11.8)
Post-test	100.7 (17.3)	95.5 (11.1)
Pre-test Comorbidity	0.4 (0.6)	0.5 (0.8)
Urinary Function		
Pre-test	57.9 (23.9)	35.5 (18.9)
Post-test	74.0 (28.6)	57.0 (26.8)
Urinary Bother		
Pre-test	50.0 (31.3)	40.0 (28.0)
Post-test	66.6 (38.6)	63.3 (26.5)
Sexual Function		
Pre-test	8.5 (6.8)	11.6 (11.4)
Post-test	13.0 (16.4)	20.4 (13.5)
Sexual Bother		
Pre-test	51.7 (40.6)	26.7 (35.9)
Post-test	56.7 (41.7)	26.7 (32.0)

Table IV. Data from Lepore et al

Variable	Group Assignment		
	Control Mean (S.D.)	Education Mean (S.D.)	Education plus Discussion Mean (S.D.)
Depressive Symptoms			
Baseline	0.46 (0.52)	0.54 (0.45)	0.49 (0.48)
2 weeks post	0.38 (0.48)	0.50 (0.39)	0.37 (0.36)
6 months post	0.40 (0.52)	0.41 (0.41)	0.39 (0.41)
12 months post	0.40 (0.49)	0.43 (0.42)	0.35 (0.44)
Health Behaviors			
Baseline	20.88 (4.36)	20.74 (4.34)	20.59 (3.77)
2 weeks post	19.95 (3.97)	20.38 (4.18)	21.34 (3.72)
6 months post	17.77 (3.80)	18.70 (3.89)	19.19 (4.04)
12 months post	18.47 (3.97)	18.81 (3.75)	18.52 (3.87)
Mental Functioning			
Baseline	51.03 (9.89)	50.18 (8.24)	50.73 (8.54)
2 weeks post	53.69 (9.10)	52.80 (7.48)	53.20 (8.20)
6 months post	53.55 (9.01)	52.28 (8.56)	53.07 (8.09)
12 months post	53.42 (8.90)	53.07 (7.21)	53.95 (7.48)
Physical Functioning			
Baseline	44.82 (9.17)	46.54 (8.14)	46.91 (7.73)
2 weeks post	49.15 (9.69)	51.41 (6.47)	51.55 (7.52)
6 months post	47.19 (10.39)	48.38 (7.99)	50.55 (6.96)
12 months post	47.42 (10.77)	48.25 (9.43)	49.39 (8.25)
Urinary Function			
Baseline	60.13 (27.15)	64.13 (29.13)	60.35 (29.68)
2 weeks post	75.11 (21.94)	75.53 (21.65)	75.43 (23.21)
6 months post	82.58 (19.23)	79.78 (18.89)	81.69 (20.03)
12 months post	83.00 (18.26)	84.25 (18.77)	83.44 (19.17)
Urinary Bother			
Baseline	60.31 (32.73)	55.95 (30.46)	55.81 (33.36)
2 weeks post	75.32 (29.55)	77.16 (24.43)	76.45 (31.24)
6 months post	82.91 (24.53)	79.57 (24.26)	81.47 (25.34)
12 months post	84.81 (24.16)	84.82 (23.29)	83.14 (24.98)
Sexual Function			
Baseline	20.51 (25.51)	17.13 (21.20)	19.41 (24.33)
2 weeks post	24.04 (22.62)	19.33 (21.63)	24.16 (26.33)
6 months post	26.30 (26.01)	25.69 (28.11)	28.69 (28.27)
12 months post	28.89 (27.87)	27.14 (28.47)	34.24 (30.62)
Sexual Bother			
Baseline	45.25 (40.05)	41.87 (40.60)	46.69 (39.58)
2 weeks post	35.76 (37.70)	40.63 (39.25)	50.58 (37.57)
6 months post	33.86 (37.35)	38.44 (39.37)	46.73 (39.91)
12 months post	37.99 (37.52)	49.10 (37.94)	56.18 (38.17)
Bowel Function			
Baseline	83.37 (18.56)	79.46 (18.46)	82.55 (17.60)
6 months post	89.57 (14.06)	86.38 (13.19)	88.01 (14.07)
12 months post	89.33 (13.85)	88.35 (14.18)	90.50 (11.19)
Bowel Bother			
Baseline	81.56 (26.39)	76.19 (25.71)	82.85 (24.63)
2 weeks post	88.29 (19.13)	88.27 (18.99)	87.50 (20.20)
6 months post	87.34 (22.60)	85.54 (20.70)	88.24 (18.33)
12 months post	88.92 (21.09)	89.29 (19.90)	90.41 (17.22)
Quiz % Correct			
Baseline	31.06 (22.65)	35.60 (23.27)	35.62 (23.05)
2 weeks post	36.71 (21.65)	53.58 (25.21)	53.18 (25.78)

Table V. Data from Katz et al

Variable	Group	
	Support Groups	CaPSURE
Mental Health		
No. of Respondents	84	2236
Mean (Range)	81.7 (32-100)	77.7 (0-100)
Emotional Role		
No. of Respondents	90	2211
Mean (Range)	85.9 (0-100)	77.9 (0-100)
Social Functioning		
No. of Respondents	88	2236
Mean (Range)	90.3 (25-100)	84.4 (0-100)
General Health		
No. of Respondents	88	2249
Mean (Range)	77.6 (8.3-100)	67.0 (0-100)
Vitality/Fatigue		
No. of Respondents	84	2235
Mean (Range)	70.8 (0-100)	61.7 (0-100)
Physical Functioning		
No. of Respondents	88	2235
Mean (Range)	88.2 (0-100)	76.5 (0-100)
Physical Role		
No. of Respondents	90	2209
Mean (Range)	83.6 (0-100)	66.3 (0-100)
Bodily Pain		
No. of Respondents	88	2237
Mean (Range)	90.2 (37-100)	83.1 (0-100)
Urinary Function		
No. of Respondents	93	2261
Mean (Range)	82.2 (0-100)	78.6 (0-100)
Urinary Bother		
No. of Respondents	92	2230
Mean (Range)	78.8 (0-100)	73.4 (0-100)
Sexual Function		
No. of Respondents	94	2208
Mean (Range)	31.7 (0-90.63)	21.3 (0-100)
Sexual Bother		
No. of Respondents	92	2069
Mean (Range)	57.6 (0-100)	42.5 (0-100)
Bowel Function		
No. of Respondents	94	2237
Mean (Range)	86.2 (39.25-100)	84.2 (6.25-100)
Bowel Bother		
No. of Respondents	92	2221
Mean (Range)	86.7 (25-100)	81.4 (0-100)